

Circle the correct partial differential equation for the function below.

1) Transformed 1 unit down

$$f(x) = 4^{-x} - 1$$

2) Reflected over the x-axis

$$f(x) = -4^{-x}$$

$$f(x) = -4^{-x}$$

3) Vertically stretched by 1

$$f(x) = 2(4^{-x})$$

4) Vertically stretched by 2

$$f(x) = 4^{(2^{-x})}$$

2) Transformed 1 unit to the left

$$f(x) = 4^{(x+1)}$$

4) Reflected over the y-axis

$$f(x) = 4^{(1-x)}$$

3) Vertically compressed by $\frac{1}{2}$

$$f(x) = \frac{2}{4^{-x}}$$

4) Vertically compressed by $\frac{1}{2}$

$$f(x) = \frac{1}{2}(4^{-x})$$

Circle the correct partial differential equation for the function below.

1) Transformed 3 units down and 1 unit right

$$f(x) = 4 \log_4(x+3) - 3$$

2) Reflected over the x-axis

$$f(x) = -4 \log_4 2^x$$

3) Vertically stretched by 4

$$f(x) = 4 \log_4 2^x$$

4) Vertically stretched by 2

$$f(x) = 2 \log_4(2^x)$$

4) Vertically compressed by $\frac{1}{2}$

$$f(x) = \frac{1}{2} \log_4(2^x)$$

2) Transformed 1 unit to the left and 1 unit up

$$f(x) = 4 \log_4(x+1) + 1$$

4) Vertically stretched by 4

$$f(x) = 4 \log_4(-x)$$

3) Vertically compressed by $\frac{1}{2}$

$$f(x) = \frac{1}{2} 4 \log_4 2^x$$

4) Vertically stretched by $\frac{1}{2}$

$$f(x) = \frac{1}{2} \log_4(2^x)$$

3) Transformed 3 units up and 1 unit down

$$f(x) = 4 \log_4(x-3) - 3$$